

## **ELECTROMAGNETIC AND MECHANICAL MODE INTERACTIONS OF SPOKE-LOADED CAVITIES**

Z. Conway, K.W. Shepard, M.P. Kelly, J. Fuerst, M. Kedzie,  
University of Illinois Urbana-Champaign

### *Abstract*

This paper reports the investigation of the electromagnetic and mechanical properties of spoke-loaded intermediate- $\beta$  superconducting cavities being developed for both CW and pulsed operation. These structures are of interest in large new ion linacs such as the proposed RIA driver linac and the 8-GeV FNAL proton driver. Results characterizing the interaction between electromagnetic and mechanical structure will be presented focusing on Lorentz and mechanical tuner transfer functions.

**NO SUBMISSION RECIEVED**